

Audience: Scientists and professional staff in R&D, manufacturing, processing, quality control/reliability involved with adhesion aspects of coatings and adhesion sensitive applications.

Level: Beginner- Intermediate; introduction/overview

Prerequisites: Elementary background In chemistry, physics or materials science.

Duration: 3 days

Course fee and materials: \$1,295, includes break refreshments, complete set of lecture notes and copy of handbook and reference guide ADHESION MEASUREMENT METHODS: THEORY AND PRACTICE, (CRC PRESS, 2006)

Learn From Internationally Recognized Professionals

This course is being taught by Drs. Kash Mittal and Robert Lacombe. Dr. Mittal is an internationally recognized authority on adhesion and surface science topics. He was Editor-in-Chief of the Journal of Adhesion Science and Technology one of the premier international journals in adhesion science for 25 years since 1987 and is currently editor of Reviews of Adhesion and Adhesives a prestigious journal that accepts papers by invitation only. He has also edited over 100 books dealing with all aspects of adhesion and surface and interface technology. His accomplishments in this field have recently been recognized at a special symposium in his honor at the 240th meeting of the American Chemical Society held in Boston, MA, August 2010. He has received many awards and honors and has given this course worldwide.

Dr. Lacombe has been involved in adhesion and surface science technology as a scientist and engineer in the microelectronics industry dealing with problems arising in the development and manufacture of multilevel thin film structures at the heart of modern computer and hand held device technology. He has taught a short course on adhesion measurement methods for the past 15 years and has published an authoritative handbook and reference volume on this topic which will be made available to all students who attend the course.

Drs. Mittal and Lacombe have jointly organized over 60 international symposia dealing with all aspects of adhesion phenomena and surface science and have attracted the participation of the world's leading researchers on these topics. Much of the content of the course has been derived from this long and productive interaction with the world's leading investigators in adhesion and surface science. It is expected that the student will benefit not only from the extensive experience of the instructors but also from face to face discussions on topics of particular interest.

Adhesion's Important Role Today

Adhesion plays an important role in many technologies and industries, viz., aerospace, microelectronics, automotive, thin films, optics, coatings, paint and so on. Broadly speaking, the topic can be divided into two categories: film or coating/substrate combination and adhesive joints. Films and coating are used for a variety of purposes and irrespective of their intended function, these must adhere adequately to the underlying substrate. So the need for understanding and controlling the factors affecting adhesion is quite patent.

Furthermore, the durability of the bond (on exposure to process chemicals, moisture, corrosives, etc.) is of paramount concern and importance. This course presents an overview of the chemistry, physics and mechanics of adhesion in regard to understanding fundamental adhesion mechanisms. You will learn how to improve and control them and the latest adhesion measurement techniques which are being used to evaluate the PRACTICAL ADHESION of coatings and laminate structures.

Emphasis is given to methods which can be carried out in a manufacturing environment as well as in the lab environment which give results that are directly relevant to the durability and performance of the structures under investigation. The effects of coating elastic properties and residual stress are considered as well as other external influences which affect durability under use conditions.

INSTRUCTORS AND CONTACT INFORMATION

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For detailed information and registration: www.mstconf.com/AdhesionCourse.htm